

Top Ten Deficiencies and Helpful Hints to Avoid Them

(Deficiency numbers for RO V from FY10)

K29 – Hazardous Areas

- Doors for nonsprinklered hazardous areas must be at least 45min fire resistance rated (there should be unpainted labels on each door) (Existing HC)
- Hazardous area enclosures may need to be 1hr fire resistance rated in addition to requiring sprinkler protection (New HC and severe hazard existing HC)
- Doors for all hazardous areas need to fully self-close when tested
- Soiled utility bins need to be stored in a hazardous room when unattended
- Doors can only be held open by a device that releases upon activation of the fire alarm system, local smoke detectors, and the sprinkler system

K144 – Emergency Generators

- Weekly visual inspections must be conducted and documented (Manufacturer's list or list of applicable items from NFPA 110 Appendix A)
- Monthly load tests must be done for a minimum of 30min under load (cool down without load must be outside of the 30min test)
- Monthly load tests for all generators must meet one of the requirements of NFPA 110 Section 6-4.2 (There must be sufficient information to show how the load tests meet requirements)
- A remote annunciator panel must be installed in a separate location from the generator with an audible trouble signal in a location where it can be heard 24hrs a day (Remote panel trouble indicators should at least mirror the trouble indicators on the generator. If no trouble indicators on generator, remote panel should consist of a general audible and visual trouble alarm)
- If generator is located indoors there must be at a battery-powered emergency light in the generator room. If the generator is located outdoors then there either needs to be a battery-powered emergency light at the generator location or it needs to be accessible for a car to provide illumination with its headlights (A flashlight at the generator location does not meet this requirement)

K62 – Sprinkler System Inspection, Testing, and Maintenance

- Sprinklers cannot be painted, corroded/oxidized, loaded, or have other impediment
- The spare sprinkler cabinet must contain at least six sprinklers, with the stock being at least two of each type and temperature rating of sprinkler installed in the building. Also, there must be a special sprinkler wrench for each type of sprinkler

K38 – Means of Egress

- The floor level on each side of the door must be level (In existing buildings there can be a grade change if the change is equal to that of one step)
- Delayed-egress devices can only be installed in a building that has either a complete sprinkler system or complete fire detection system. Also, there must be an instruction sign on the door with a delayed-egress device. Delayed-egress devices must release upon activation of the fire alarm or within 15 seconds of an acceptable amount of force being applied to the door for three seconds. Also, there can only be one delayed-egress device in a means of egress
- Doors must open with only one releasing operation
- Means of egress must be clear and unobstructed at all times and useable in all weather conditions

K18 – Corridor Doors

- Corridor doors can be held open with a device that releases with a push or pull of the door, if the door is not required to be self-closing or automatically releases upon activation of the fire alarm system if required to be self-closing
- Corridor doors in sprinklered buildings must be smoke resisting (gap between the face of door and the stop on the frame cannot exceed .5in). Corridor doors in nonsprinklered buildings must be 20min fire resistance rated or be 1.75in solid-bonded wood core and must be smoke resisting (gap between the face of the door and the stop on the frame cannot exceed .25in)
- Corridor doors require automatic positive latches

K50 – Fire Drills

- Fire drills must be documented (Time, date, transmission of alarm, etc.)
- Fire drills must be conducted at a frequency of one per shift per quarter
- Fire drills must be conducted under varying conditions (Time during shift, location, type of fire, etc.)

K25 – Smoke Barriers

- Continuity of smoke barriers (Outside wall to outside wall or other smoke barrier and from floor to roof/floor deck above)
- Properly firestopped penetrations (Existing penetrations must resist the passage of smoke. New penetrations need an approved through penetration system)
- Properly firestopped smoke barrier/floor joint systems (flutes of corrugated metal decks cannot be left open or be filled with only insulation or other loose filled material)
- Expandable foam cannot be used (Fire rated expandable foam does not contain a fire resistance rating. It only has a flame spread rating)
- Smoke barriers must be continuous to the roof deck of a roof/ceiling assembly

K147 – Electrical

- Unacceptable use of power strips (Daisy-chained, high-current draw devices, medical equipment)
- Missing junction box, light switch, or electrical outlet cover plates
- Extension cords being used for more than temporary use

K52 – Fire Alarm System Testing and Maintenance (K51 – Fire Alarm System Installation)

- A fire alarm panel must be installed in a supervised location (24hr staffed or have a smoke detector connected to the fire alarm system at the location)
- A trouble signal from the fire alarm system must be able to be heard 24hrs a day
- Annual fire alarm system test documentation must be complete, accurate, and show test results for all initiating and supervisory devices
- Smoke detectors must be located out of the direct airflow of an air supply or return
- Wall mounted smoke detectors must be installed between 4in and 12in of the ceiling (Measured to the center of the detector)

K56 – Sprinkler System Installation

- Sprinklers cannot be obstructed by other objects (light fixtures, ducts, cubicle curtains, storage)
- Sprinklers must be properly spaced from other sprinklers (Distance between two sprinklers should be between 6ft and 15ft)
- Unsupported sprinkler pipe arm-overs cannot exceed 24in for steel pipe (12in for copper pipe)
- Sprinkler pipes must be properly supported off the building structure (hangers must be properly spaced for size and type of pipe and all installed hangers must maintained in their installed locations)
- All areas of a building must be sprinkler protected for a building to be considered fully sprinklered (Combustible overhangs greater than 4ft, elevator machine rooms, electrical rooms, walk-in coolers/freezers, and closets are the most commonly omitted areas)